



The National Transportation Systems Center



Volpe Center Request For Information (RFI) Industry Day

September 20, 2014



The National Transportation Systems Center



Volpe Center Overview and Goals

Presented by
Robert Johns
Director
Volpe Center

Industry Day
September 20, 2014

Agenda

- I. About Volpe Center
- II. Who We Are
- III. What Makes Us Unique
- IV. Transportation Innovation for the Public Good
- V. Goals

I. About Volpe Center

Background

- Volpe established in 1970
- Part of U.S. Department of Transportation (DOT) Office of Research and Technology
- Named after former DOT Secretary and MA Governor John A. Volpe

Volpe supports DOT goals

- Safety
- State of good repair
- Economic competitiveness
- Livable communities
- Environmental sustainability



II. Who We Are

Our Purpose: Advancing transportation innovation for the public good

Our Mission: Improve the nation's transportation system by serving as a center of excellence for informed decision making, anticipating emerging transportation issues, and advancing technical, operational, and institutional innovations

Our Values:

- Public service
- Innovative solutions
- Professional excellence
- Collaboration and partnering



III. What Makes Us Unique

Multimodal, world-class resource

- Decades of experience and expertise in every mode of transportation
- Institutional knowledge of the global transportation system and its stakeholder perspectives
- Experience in responding to large-scale global and national transportation challenges

Cross-disciplinary expertise

- Knowledge in the full spectrum of technologies and disciplines relevant to transportation system improvements
- Experience in assembling interdisciplinary teams to address technology and public policy innovations



III. What Makes Us Unique (cont'd)

Entrepreneurial, objective, efficient

- Fee-for-service; no direct appropriations
- Flexibility and responsiveness of a consultant
- A trusted, objective advisor focused on safety and the public good

Federal advantage

- Guided by a deep understanding of federal responsibilities, objectives, and practices
- Accessibility of a federal in-house resource that can partner on strategy, tactics, policy, and acquisitions
- Driven by public interest—not profit



IV. Transportation Innovation for the Public Good

- Wake turbulence separation standards for aircraft
- Highway rail grade crossing safety
- Corporate average fuel economy (CAFE)
- Motor vehicle crash avoidance
- Global maritime situation awareness



V. Goals

- Acquire a state-of-the-art facility to better serve the Volpe Center mission and goals
- Provide flexible office, laboratory and support space allowing the Volpe Center to adapt and grow over time
- Minimize interruptions to current Volpe Center operations
- Continue successful relationship with the Kendall Square community and the City of Cambridge



*The National Transportation Systems
Center*



Cambridge Market Overview

Presented by
Peter Bekarian



Industry Day
September 20, 2014

Agenda

- I. Economic Overview
- II. Market Fundamentals
- III. Tenant Demand
- IV. Development Pipeline

Economic Overview

TOP 5 OFFICE MARKETS FOR INVESTORS

- 1 New York
- 2 Boston / Cambridge
- 3 San Francisco
- 4 Seattle
- 5 Los Angeles

2014 Emerging Trends in Real Estate



Education
ranked #1



Innovation: High tech and life sciences
1st in NIH funding, 1st in VC deals/million people, 1st in scientists and engineers (% workforce), 2nd in R&D per capita



Higher education and healthcare
20% of total jobs are located in these sectors

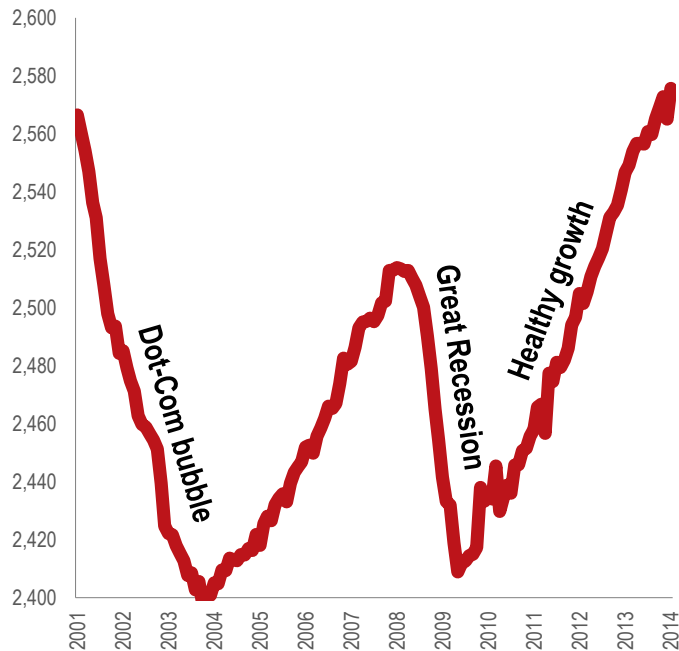


Transportation
ranked #3

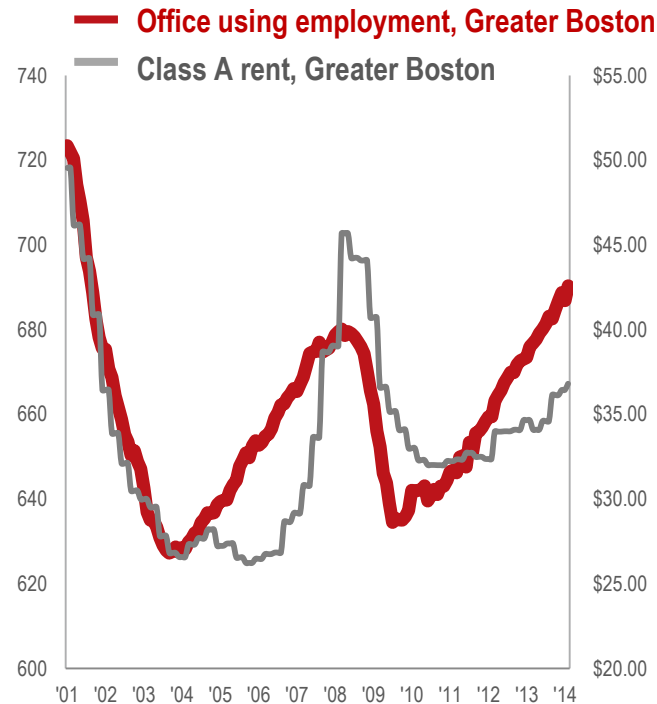


Walkability
ranked #3

Economic Overview



Back to dot-com employment peak
Thousands of jobs, Greater Boston



Office-using employment 33k off from
2001 levels but eclipse 2008
Thousands of jobs, Greater Boston
Asking Rents

ECONOMIC HIGHLIGHTS

100,000

Jobs lost in Great
Recession

167,000

Jobs gained since 2010

3.3%

US unemployment rate for
graduate+ workers

25%

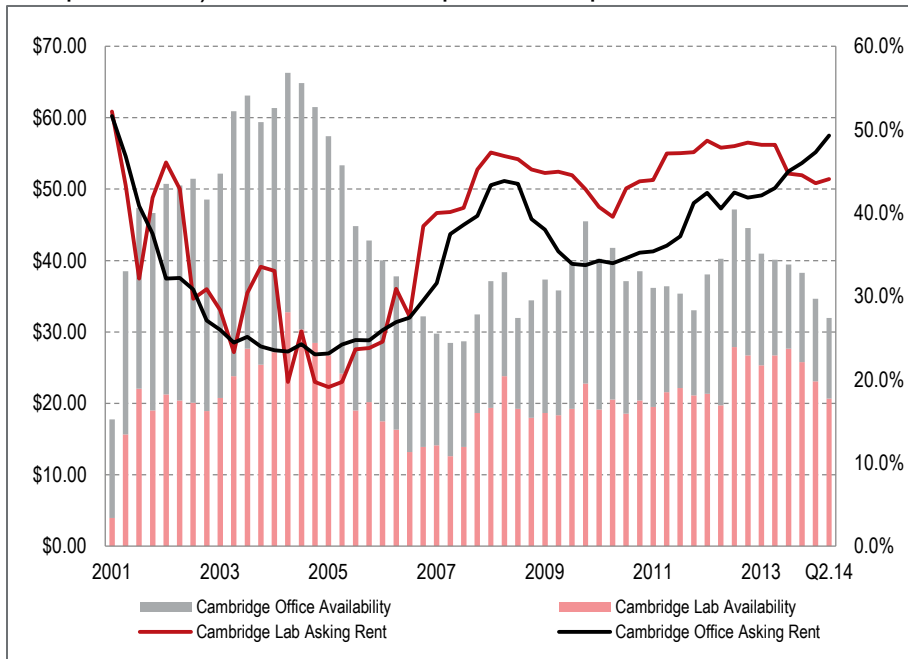
CBD Rent increase
since 2010

15%

Cumulative rent growth
anticipation by YE2015

Cambridge Market Fundamentals

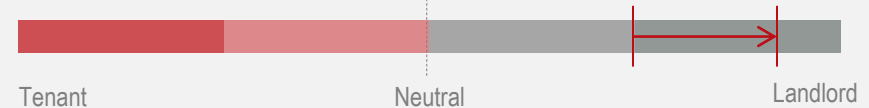
- Cambridge is in the midst of a historic real estate and economic cycle
- Lab market rebounding nicely after temporary lag in fundamentals due to Vertex relocation.
- Leasing activity driven by organic growth of both Big Pharma and emergent local biotech firms.
- Limited supply of large, contiguous availabilities (50+k SF)
- Over 1.89M s.f. of office & lab construction underway (89% preleased) – no additional spec development.



Q2 2014 Statistics	Overall Cambridge Market	East Cambridge Office	East Cambridge Lab
Supply (mm)	19.2 SF	6.4 SF	7.7 SF
% class A	70.6%	78.5%	81.7%
Asking Direct Rent	\$51.82	\$57.50	\$56.30
y/y growth	2.8%	14.7%	-1.3%
Vacancy	8.0%	6.7%	6.9%
y/y change (ppts)	-0.5	-2.5	-2.7
historical average	7.9%	8.1%	7.6%
L4Q Direct Net Absorption	1,388,687	413,621	922,987
as % stock	7.3%	6.4%	12.0%
historical annual average	379,568	73,063	251,404

**Direct net absorption defined as absorption of physically vacant space excludes future available and sublease space)*

Leverage in 2014



Cambridge: The Battle for Space

New arrivals to Cambridge

- Blue-chip companies looking to gain presence and likely to grow more
- Companies continue to prioritize recruiting; the war for talent is in full swing



Growing in Cambridge

- Large blue-chip companies eating up space
- Small to mid-size firms expanding
- Tenants “getting creative” to find more space

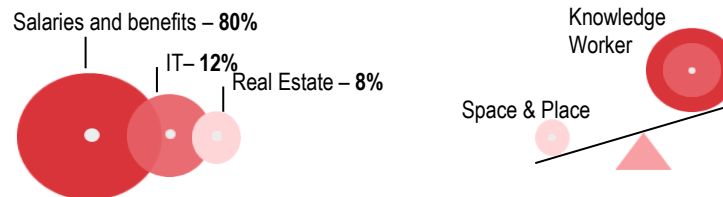


Who to watch for?

- Global companies looking to establish Cambridge presence.
- Companies with small operations in Cambridge that could grow even bigger.



8% leveraging the 80%



Source: Boston Properties

Tenant Demand

Quick Demand Statistics

2.5M

Total square feet
required

60

Active tenant
requirements

28%

Of tenants are
expanding footprint

64%

Of demand is High-
tech and Life Science

29%

Tenants require
20,000+ square feet

38%

Of tenant demand is
new to Cambridge

Market Moving Tenants



125,000 SF



400,000 SF



150,000 SF



200,000 SF



500,000 SF



100,000 SF

EMC²



150,000 SF



150,000 SF



200,000 SF



90,000 SF

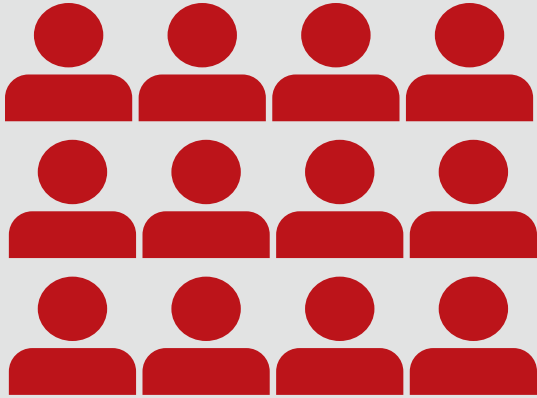
Project
Aardvark

80,000 SF



50,000 SF

Supply and Demand



12 Tenants



7 Options

7 Existing Options – 1,130,000 SF 12 Active Tenants – 2,195,000 SF



1). 650 East Kendall - 300,000 s.f. - \$67.00 NNN

2). Two First Street – 200,000 s.f. - \$58.00 Gross

3). 50 Hampshire Street – 170,000 s.f. - \$65.00 Gross

4). 675 West Kendall – 125,000 s.f. - \$67.00 NNN

5). 301 Binney Street – 100,000 s.f. - \$62.00 NNN

6). 450 Kendall Street – 60,000 s.f. - \$75.00 Gross

7). 75-125 Binney Street – 175,000 s.f. - \$58.00 NNN (S)

Development Pipeline: Under Construction



#	Developer	Occupant	Address	RBA
1	EF Education First	EF Education First	Education Street	300,000
2	Alexandria Real Estate	Ariad Pharma	75 & 125 Binney Street	388,000
3	BioMed Realty Trust	TBD	450 Kendall Street	64,000
4	Novartis	Novartis	181 Mass. Avenue	550,000
5	Forest City	Millennium	300 Mass. Avenue	250,000
6	Carpenter & Co.	Harvard	114-116 Mount Auburn	67,000
7	MITMCo.	Pfizer	610 Main Street (Phase II)	278,000
#	<i>Under construction</i>			<i>1,897,000</i>

Development Pipeline: Permitted and Planned



#	Developer	Use	Address	RBA
1	HYM Investments	Commercial Residential	NorthPoint	2,000,000
2	Leggat McCall	Commercial Residential	40 Thorndike Street	460,000
3	Alexandria Real Estate	Commercial	50/60 Binney Street	500,000
4	Alexandria Real Estate	Commercial	100 Binney Street	417,000
5	DivcoWest	Commercial	One Kendall Square (Expansion)	100,000
6	Boston Properties	Commercial Residential	175 & 200 Binney (Cambridge Center)	400,000
7	TBD	TBD	Volpe Center	1,940,000 (maxed zoned)
8	MITMCo.	Commercial	Main Street Parcels	900,000
9	MITMCo.	Commercial	750 Main Street	193,000 (current size)
10	Bulfinch Companies	Commercial	Discovery Park	500,000 (remaining plan)
#	Permitted			3,417,000
#	Planning			3,993,000

Multi-family Activity

Snapshot

5800

Existing Units

950

Units Under
Construction

2.4%

Vacancy Rate

\$2740

Average Rent for 1-
BR units



Twenty20

Location **NorthPoint**

Developer **HYM**

of Units **355**



22 Water Street

Location **NorthPoint**

Developer **Wood Partners**

of Units **392**



The National Transportation Systems Center



Volpe Center Property Overview

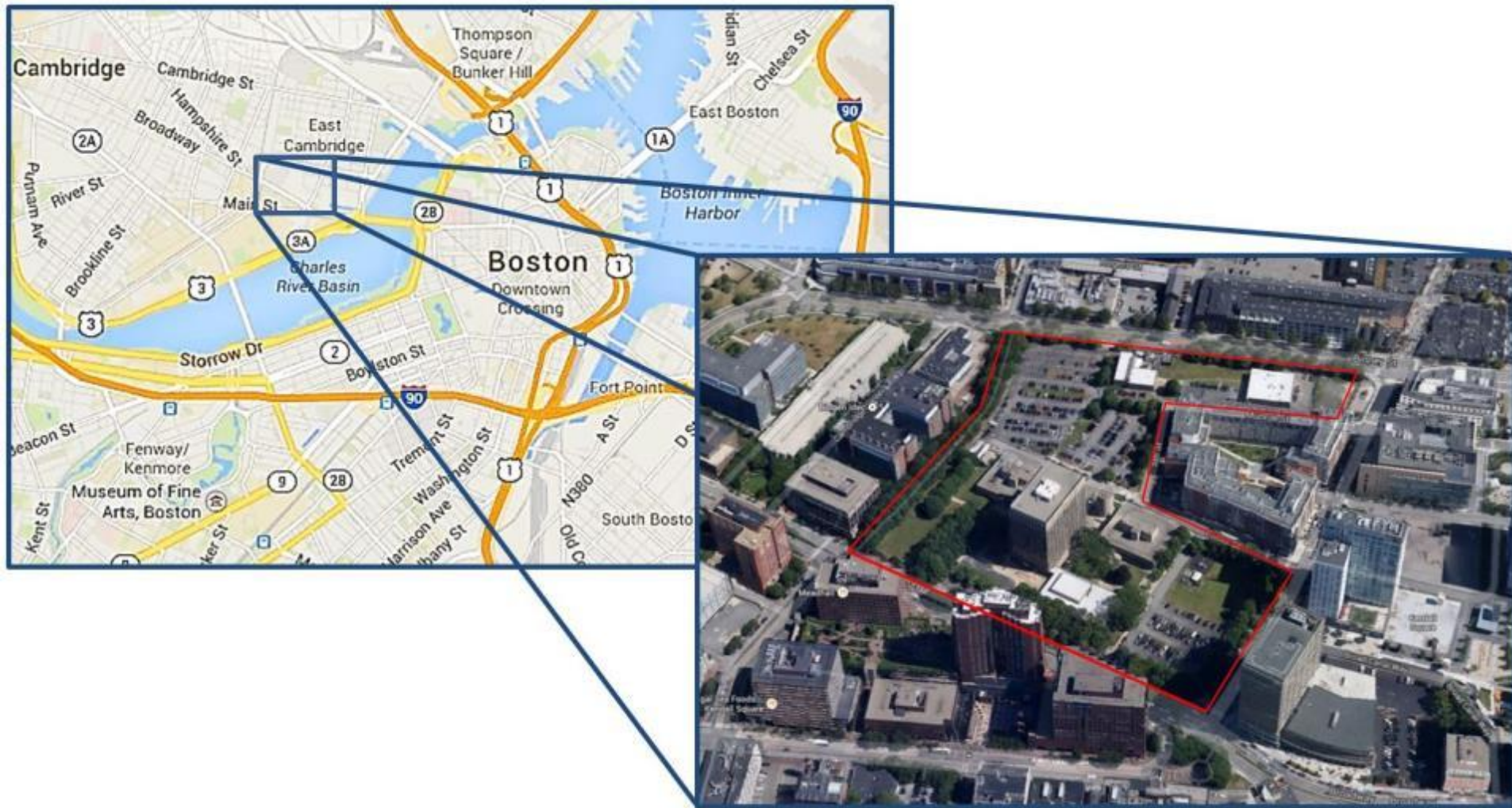
Presented by
David Duncan, P.E.
Director, Office of Facilities Management
Volpe Center

Industry Day
September 20, 2014

Agenda

- I. Location and Context
- II. Site Overview
- III. Building Information
- IV. Other Considerations

I. Location and Context



I. Location and Context



II. Site Overview

History

- Property was developed in the late 1960s for use by NASA as an electronics research center
- When NASA's mission was relocated, Property was transferred to DOT in 1970
- DOT has operated and maintained this facility since 1970

II. Site Overview

Property Summary

- Property consists of:
 - +/-14 acres of land
 - Six buildings with approx. 375,000 gross square feet (GSF) of space
 - Multiple surface parking lots with +/- 570 parking spaces
 - Large areas of open, landscaped land
- Extensive frontage along Binney Street to the north, Third Street to the east and Broadway to the south
- A pedestrian walkway abuts the western boundary of the property

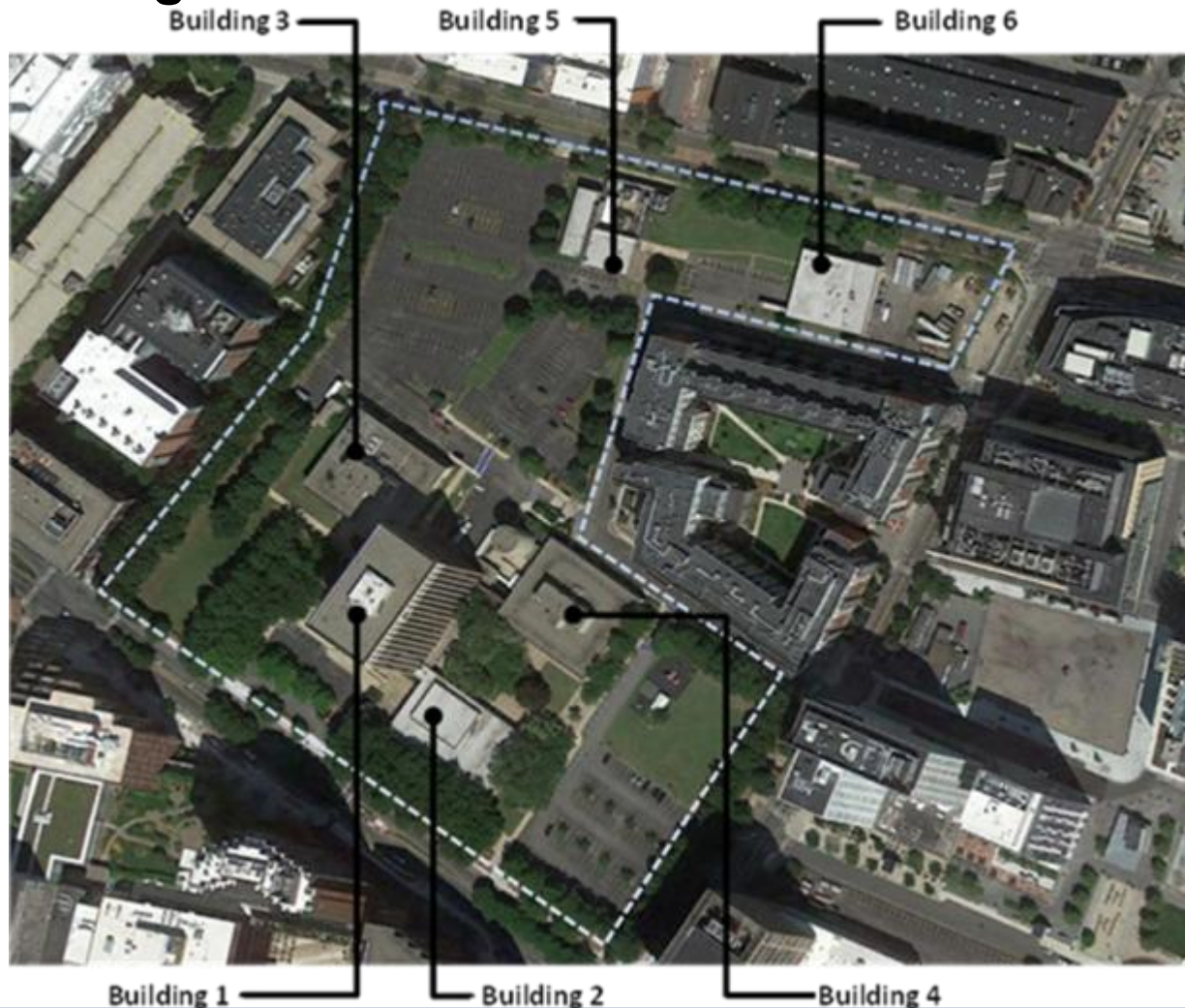
III. Building Information

Overview

- The six buildings were constructed in the 1960s
- Buildings have been well maintained but are in need of modernization
- Buildings do not optimally support the transportation innovation mission
- The buildings are located throughout the property in a campus-like setting
- DOT believes that the Volpe Center's functions can be adequately supported in a similar square footage, configured in a reduced footprint

III. Building Information

Building Locations



III. Building Information

Building Descriptions

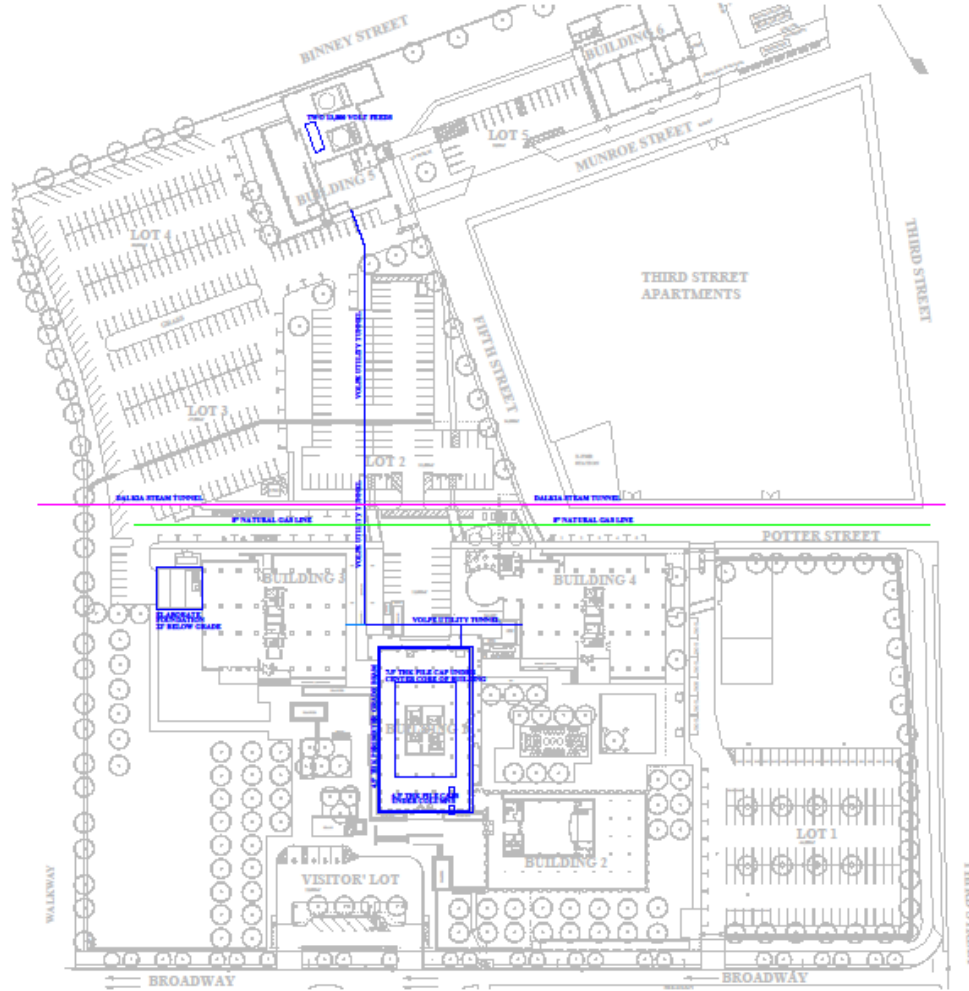
Building	Description
Building 1 (Main Building)	<ul style="list-style-type: none">•13-story structure with a gross area of approx. 211,654 GSF (each floor approx. 16,000 GSF)•Concrete frame with concrete floors and buff brick exterior•Uses include office, dry lab, conference space and cafeteria
Building 2	<ul style="list-style-type: none">•1-story structure with a gross area of approx. 21,970 GSF•Concrete frame and brick masonry walls•Uses include office, auditorium, conference space and fitness center
Building 3	<ul style="list-style-type: none">•3-story structure with a gross area of approx. 67,977 GSF•Reinforced concrete structure with an adjoining high bay•Uses include office, conference space and dry lab space
Building 4	<ul style="list-style-type: none">•2-story structure with a gross area of approx. 46,899 GSF•Reinforced concrete structure with an adjoining tower (silo)•Uses include office, dry lab space, library storage and daycare center
Building 5	<ul style="list-style-type: none">•Freestanding, 1-story high-bay structure with a gross area of approx. 13,856 GSF•Provides mechanical support for the Property
Building 6	<ul style="list-style-type: none">•Freestanding, 1-story reinforced concrete structure (with partially finished 2nd floor) with a gross area of approx. 12,934 GSF•Uses include office, dry & wet lab space, and shipping and receiving

III. Building Information

Recent Building Improvements

- New windows in Buildings 2, 3, 4 & 6
- Exterior 2nd floor exit at Building 6
- Fire sprinklers installed in Buildings 2 & 6
- Various sprinkler piping alterations
- Silo roof replacement and Building 4 waterproofing
- New roofs, Buildings 2, 5 & 6
- Various office/area upgrades
- Computer room fire pre-action systems
- Computer room AC replacement
- Courtyard wall replacement at Building 5

Building Systems



Building Layouts



IV. Other Considerations

Environmental

- Phase I Environmental Site Assessment this property is available for download at www.gsa.gov/volpecenter



The National Transportation Systems Center



Volpe Center Request for Information (RFI) Overview

Presented by
Gabrielle Sigel
Project Manager
GSA New England Region

Industry Day
September 20, 2014

Overview

- General Services Administration (GSA), in consultation with Department of Transportation (DOT), issued Request for Information (RFI) on August 26, 2014
- Government exploring options to convey all or portions of Volpe Center campus (the Property) out of federal ownership in exchange for new or renovated Volpe facility on or proximate to Property
- RFI solicits feedback from developers and other members of development community potentially interested in the exchange
- RFI not a solicitation

Key Strategic Objectives

- Acquire turnkey state-of-the-art facility for the Volpe Center (the New Facility);
- Leverage expertise of real estate industry to optimize use of the Property;
- Maximize financial return to the government and taxpayers; and
- Minimize impact on operations and avoid need for swing space or temporary relocation of operations.

New Facility

- New Facility will be single facility or connected facilities
- Accommodate office and laboratory space as well as public access space to showcase work of the Volpe Center

Content Highlights

- Property Description
- Examples of possible transaction structures
 - Exchange for renovation of existing building(s) on Property
 - Exchange for construction of New Facility on or proximate to Property
- Questionnaire
 - Industry feedback for planning purposes
- Submission of responses
 - Submit electronically to volpeproject@gsa.gov by 5:00 PM on Friday, October 10, 2014

Conclusion

- RFI can be found online: www.gsa.gov/volpecenter
- Questions regarding RFI may be submitted to volpeproject@gsa.gov
- Responses to submitted questions will be posted on www.gsa.gov/volpecenter
- Project website updated as new information becomes available
- Contact Brian Murphy, Assistant City Manager for Community Development for information on zoning



The National Transportation Systems Center



City of Cambridge

Presented by

Brian Murphy

Assistant City Manager for Community Development

City of Cambridge

And

Iram Farooq

Chief of Policy & Planning / Deputy Director for Community Development

City of Cambridge

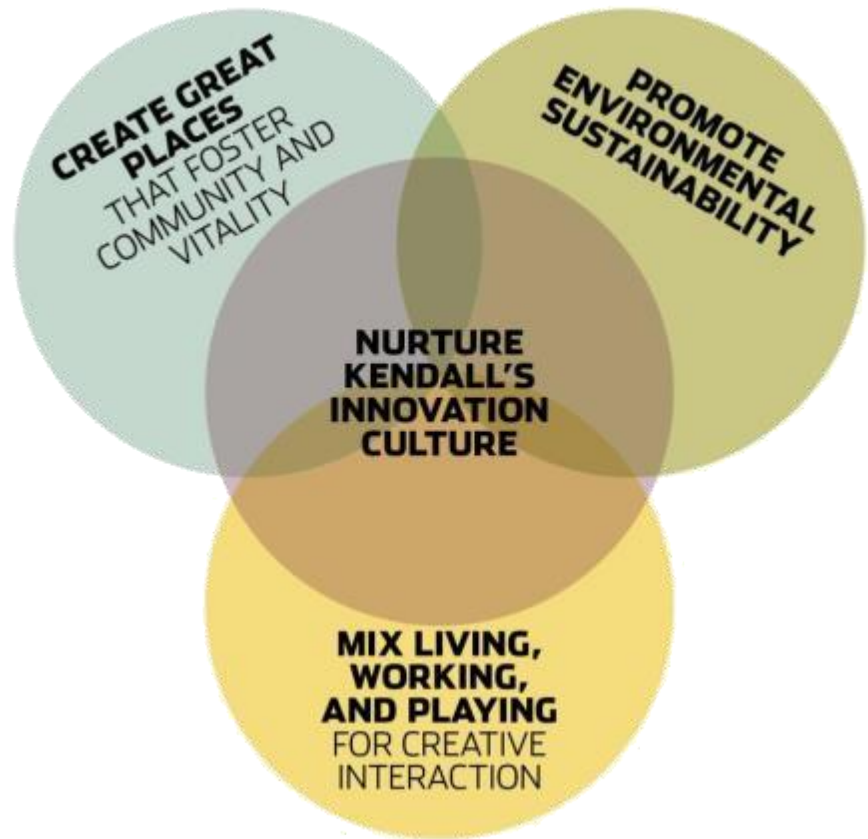
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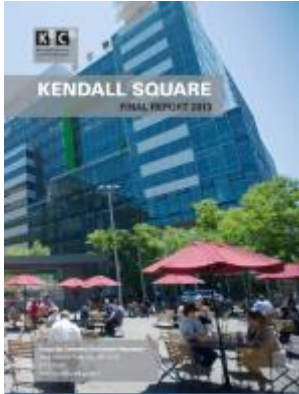
Kendall Square Plan (K2): Vision & Goals

A dynamic public realm connecting diverse choices for living, working, learning, and playing to inspire continued success of Cambridge's sustainable, globally-significant innovation community.

- Nurture Kendall's innovation culture
- Create great places
- Promote environmental sustainability
- Mix living, working and playing



K2 Recommendations: Area-wide



MIT rezoning,
2012

BP Ames St
rezoning & land
disposition, 2013
**PRSP application,
2014**

MXD
PB update, 2014
BP developing
plan concept

Cambridge
Research Park

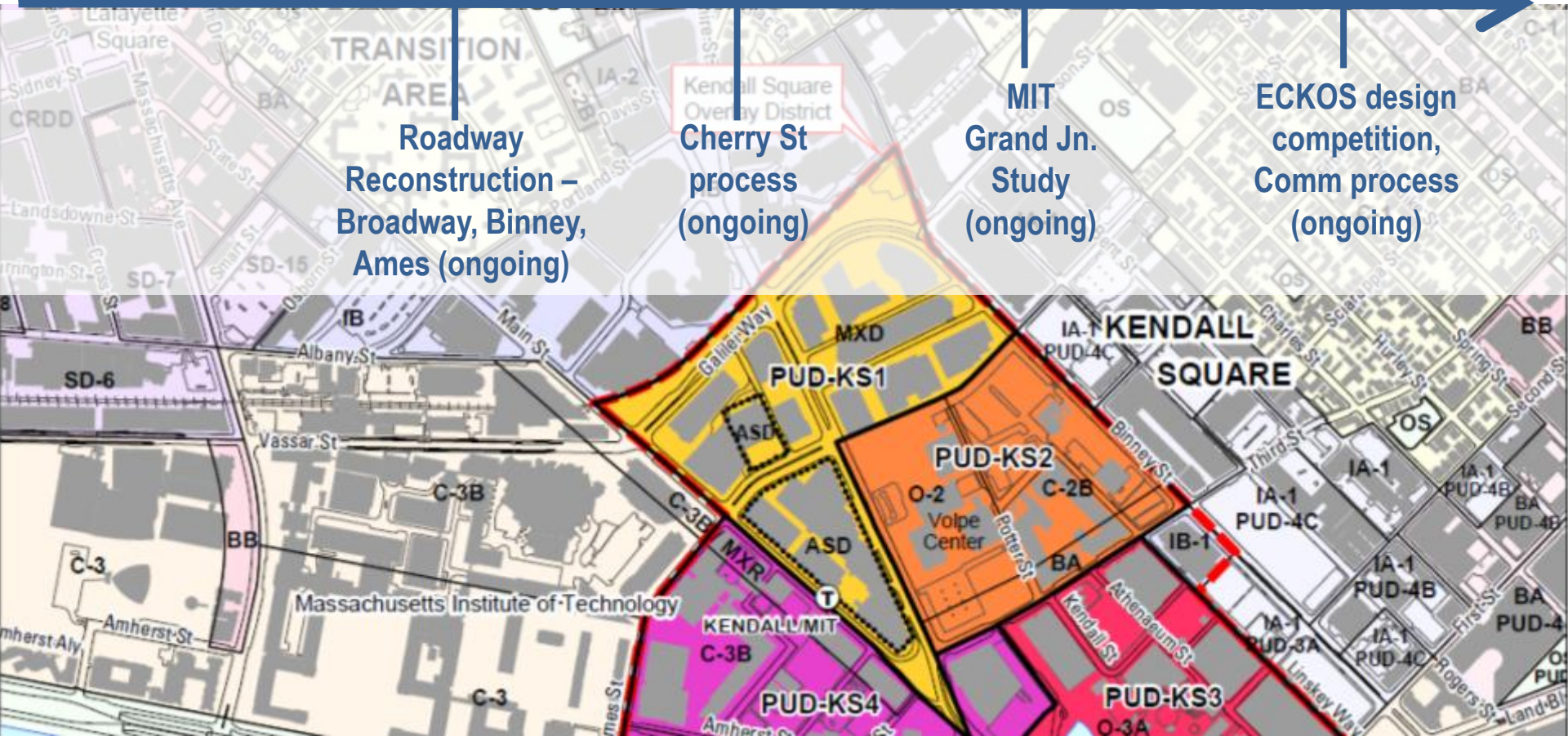
Volpe block

Roadway
Reconstruction –
Broadway, Binney,
Ames (ongoing)

Kendall Square
Overlay District
Cherry St
process
(ongoing)

MIT
Grand Jn.
Study
(ongoing)

ECKOS design
competition,
Comm process
(ongoing)



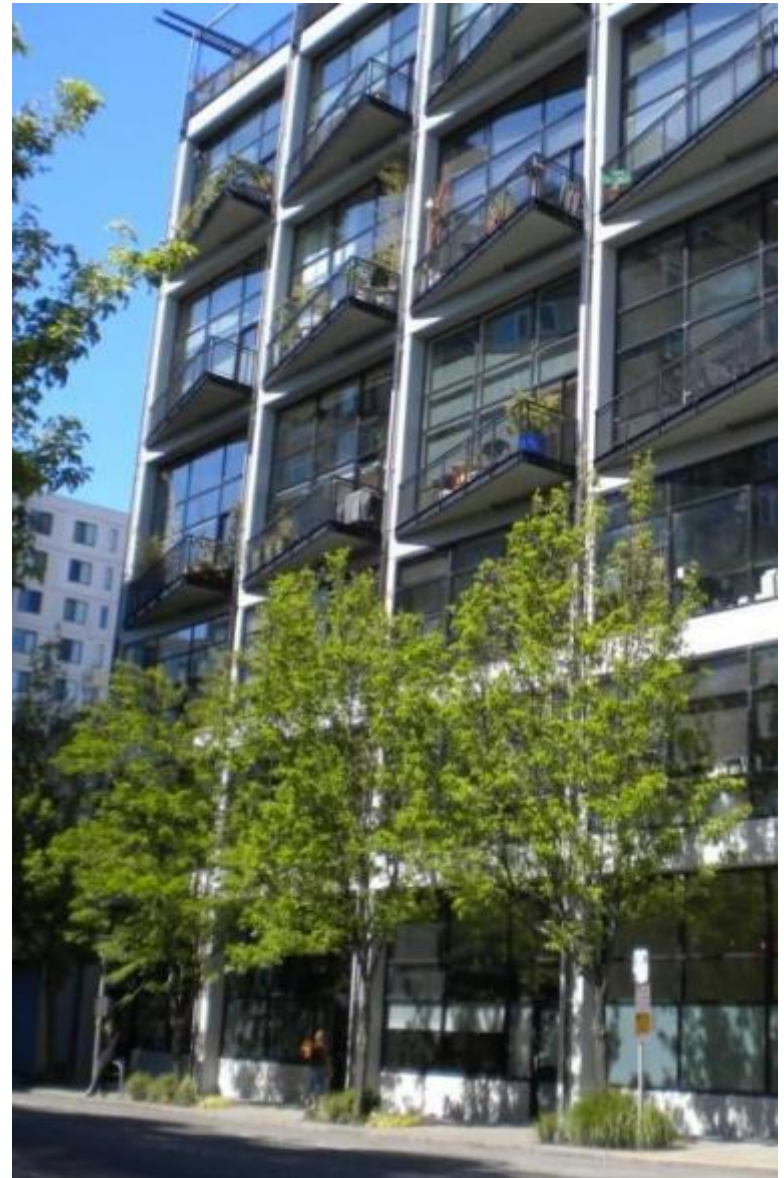
Active Ground Floors

- **Active ground floor uses** encouraged along all public streets and open spaces
- **Ground Floor Retail: Required along** Main Street, Broadway, Ames Street, Third Street and non-residential frontage along Broad Canal Way
- **Retail Exemption:** Ground-level retail exempted from the district GFA limitations
- Encourage needed retail e.g. **grocery** and **pharmacy**



Housing

- **Minimum required housing:** PUD KS-1, KS-2, and KS-4 include a minimum housing requirement.
- **Middle Income Housing** (80 – 120% of AMI): Required in buildings that exceed 250' in height. Diverse sizes, including 2-BR and 3-BR. Distributed throughout the building, not just on the top floors.
- **Phasing of minimum required housing:** Certificate of occupancy for no more than 60% of the non-residential capacity may be granted until a Certificate of Occupancy for 100% of the required housing is obtained.



Startup Innovation Space

- 5% of all non-residential GFA to be affordable 'startup innovation space' for technology startup companies
- Up to 50% of startup innovation GFA exempt from GFA limit (up to a max. 5% of non-residential GFA in the PUD)



Startup Innovation Space

- General standards for 'startup innovation space':
 - Must be provided in contiguous in increments of 20,000 sf or more
 - Min. 50% of space devoted to co-working & shared common areas
 - Flexible, short term leases of 1 month
 - Less than 10% of the 'startup innovation space' to be leased by single company
 - Average size of privately-rentable suites less than 200 sq. ft.
 - Alternative format w/PB approval
- To be located in new or existing buildings, or in partnership with other property owners.
- Annual reporting required -- number of tenants, size of spaces etc.
- May be provided off-site. Consolidation encouraged.



Community Investments/ Kendall Square Fund

- **Kendall Square Fund**
\$10.00 per square foot
payment on all non-
residential GFA in a PUD

Sustainability

- **LEED Gold** for new & existing buildings and **enhanced energy efficiency**
- Encourage **on-site energy** systems and **co-gen**;
- Assess **district steam** potential for new buildings



Transportation

- **Expand EZ Ride service coverage/frequency**; increase employer membership, contributions
- Require **enhanced TDM**
- Create **complete streets** accommodating pedestrians, bikes, transit, autos
- Create **parking maximums** for all uses, emphasize **shared parking**
- **Manage vehicular traffic** from future development and minimize additional traffic on **neighborhood streets**
- Direct auto traffic to use the **most appropriate routes** within and around the study area roadway network

Use	Auto Parking	
	Minimum	Maximum
R&D	Based on analysis	0.8 sp/1000 sq. ft.
Office		0.9 sp/1000 sq. ft.
Retail/consumer service		0.5 sp/1000 sq. ft.
Residential	0.5 sp/du	0.75 sp/du

K2 Recommendations: US DOT Volpe Block



- Increase **FAR** from 3.00 to 4.00
- Minimum 40% **housing** required
- 42% **open space**, incl. public park (flexibility re. location and configuration)
- **K2 area-wide recommendations:** active ground floors, middle-income housing, innovation office space, community investment fund, sustainability, parking and loading

EXISTING
ZONING

Kendall Square Zoning Districts
with Proposed Zoning Height Limits
City of Cambridge CDD

